

**PATENT**

Attorney Docket No. 7388/72613

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

NAKAGAWA, Akira

Application No.: 10/069,723

Filed: August 31, 2000

For: HUMAN 1p36 HOMOZYGOUS DELETION REGION

December 23, 2002

**RESPONSE TO NOTIFICATION OF DEFECTIVE RESPONSE**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In response to the Notification of Defection Response dated December 2, 2002.

The items checked below are appropriate:

**1. Status of Applicant**

This application is on behalf of ☒ other than a small entity or ☐ a small entity.

The verified statement ☐ is attached or ☐ was filed on .

**2. Documents Submitted Herewith**

- ☐ Executed Declaration of inventor(s).
- ☐ Verified Statement claiming small entity status.
- ☒ Sequence Listing, 138 pages (and accompanying Statement to Support Filing and diskette).
- ☐ Verified English translation of application.
- ☒ Copy of the Notification of Defective Response.
- ☐ Other:

In re Appln. of NAKAGAWARA, Akira  
Appln No. 10/069,723

**3. Application Filing Fee**

APPLICATION FEES				
BASIC FEE				SPAID
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total Claims	-20=		x \$18.00	\$
Independent Claims	- 3=		x \$84.00	\$
<input type="checkbox"/> Multiple Dependent Claims(s) if applicable			+\$280.00	\$
Total of above calculations =				\$
Reduction by 50% for filing by small entity =				\$( )
TOTAL =				SPAID

**4. Fee for Late Filing of Missing Parts**

Pursuant to 37 C.F.R. § 1.17(e), the surcharge for filing this Response is for ☒ other than a small entity or ☐ a small entity.

**Fee Due: \$**

**5. Fee for Submitting a Non-English Specification**

Pursuant to 37 C.F.R. § 1.17(k), the surcharge for submitting a non-English specification is included.

**Fee Due: \$**

**6. Extension of Time**

- ☐ Applicant petitions for a extension of time under 37 C.F.R. § 1.136, the fee for which is .
- ☒ Applicant believes that **no** extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

**Extension fee due with this request: \$**

In re Appln. of NAKAGAWARA, Akira  
Appln No. 10/069,723

**7. Total Fee Due**

The total fee due is:

Surcharge	\$	
Translation Fee (if any)	\$	
Application Filing Fee (if any)	\$	
Extension Fee (if any)	\$	

**Total Fee Due: \$0.00**

**8. Fee Payment**

- ☐ Attached is a check in the sum of \$ .
- ☐ Charge Account No. 06-1135 the sum of \$ . A duplicate of this transmittal is attached.

**9. Fee Deficiency**

- If any additional fee is required in connection with this communication, charge Account No. 06-1135. A duplicate of this transmittal is attached.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

By:



Kendrew H. Colton  
Registration No. 30,368

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Washington, D.C. 20006-1201  
Telephone No. (202) 419-7000  
Facsimile No. (202) 419-7007

PCT

## UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents, Box PCT  
United States Patent and Trademark Office  
Washington, D.C. 20231  
www.uspto.gov

U.S. APPLICATION NUMBER NO.

10/069,723

FIRST NAMED APPLICANT

Akira Nakagawara

ATTY. DOCKET NO.

7388/72613

INTERNATIONAL APPLICATION NO.

PCT/JP00/05930

I.A. FILING DATE

08/31/2000

PRIORITY DATE

08/31/1999

Fitch Even Tabin & Flannery  
1801 K Street N W  
Suite 401L  
Washington, DC 20005-3960

CONFIRMATION NO. 5249

371 FORMALITIES LETTER



\*OC00000009179239\*

Date Mailed: 12/02/2002

## NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fee
- Priority Document
- Assignee Statement
- Biochemical Sequence Diskette
- Biochemical Sequence Listing
- Copy of IPE Report
- Copy of references cited in ISR
- Copy of the International Application
- Copy of the International Search Report
- Oath or Declaration
- Preliminary Amendments
- Request for Immediate Examination

<b>RECEIVED</b>	
FITCH, EVEN TABIN & FLANNERY - DC	
DEC 4 2002	
CL# 7388	MT# 72613
ATTY(S) KHC	
DUE: 1/2/03	
DKT BY (1) emg	(2)

Applicant's response filed 11/19/2002 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 04/26/2002 have not been completed.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with

the requirements for a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- APPLICANT MUST PROVIDE:
  - An initial or substitute computer readable form (CRF) of the "Sequence Listing."
- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:
  - For Rules Interpretation, call (703) 308-4216
  - To Purchase PatentIn Software, call (703) 306-2600
  - For PatentIn Software Program Help, call (703) 306-4119 or e-mail at [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or [patin3help@uspto.gov](mailto:patin3help@uspto.gov)

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

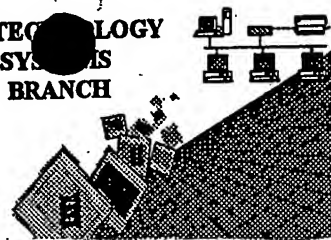
INDIA L EVANS

Telephone: (703) 305-2936

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/069,723	PCT/JP00/05930	7388/72613

FORM PCT/DO/EO/916 (371 Formalities Notice)



5630  
41

## **RAW SEQUENCE LISTING** **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/069,723  
Source: PCT10  
Date Processed by STIC: 11/19/02

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

**FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.**

**FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.**

**PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:**

**<http://www.uspto.gov/web/offices/pac/checker>**

**Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.**

**Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.**

**Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:**

1. EFS-Bio (<<http://www.uspto.gov/efb/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202



Does Not Comply  
Correction Note Needed

PCT10

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/069,723

DATE: 11/19/2002

TIME: 16:55:00

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Output Set: N:\CRF4\11192002\J069723.raw

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 6 <120> TITLE OF INVENTION: HUMAN 1p36 HOMOZYGOUS DELETION REGION  
 9 <130> FILE REFERENCE: 72613  
 11 <140> CURRENT APPLICATION NUMBER: US 10/069,723  
 12 <141> CURRENT FILING DATE: 2000-08-31  
 14 <150> PRIOR APPLICATION NUMBER: PCT/JP00/05930  
 15 <151> PRIOR FILING DATE: 2000-08-31  
 17 <150> PRIOR APPLICATION NUMBER: JP 11/245962  
 18 <151> PRIOR FILING DATE: 1999-08-31  
 20 <150> PRIOR APPLICATION NUMBER: JP 12/136266  
 21 <151> PRIOR FILING DATE: 2000-05-09  
 23 <160> NUMBER OF SEQ ID NOS: 88  
 25 <170> SOFTWARE: FastSEQ for Windows Version 3.0

## RED SEQUENCES

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- See P. 7  
for explanation  
of errors

## RAW SEQUENCE LISTING

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PATENT APPLICATION: US/10/069,723

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## RAW SEQUENCE LISTING

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DATE: 11/19/2002

TIME: 16:55:00

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2457	gctcagtga	acctctgcct	cccgggttca	agtattctc	ctgcctcaac	ctccccagta	6300
2458	gctgggatta	taggcacaca	ccactatttc	tggctaattt	ttgtgtttt	ggtagagatg	6360
2459	gggtttcacc	atgttcgcca	ggctagtctc	gaattcctga	cctcaagtga	tacacctgcc	6420
2460	ttggcctccc	aaagtgcctg	gattacaagt	gggagccacc	gcgccagct	ccatttctga	6480
2461	tgtgttccaa	tatttcaggg	cttaacgggt	gccttgaaat	agtaatgtgg	gccaggtgca	6540
2462	gtggctcacg	cctgtaatcc	cagcagttag	ggaggcgag	atgcgcagat	cacctgaggt	6600
2463	caggagtctg	agaccagcct	ggccaacatg	gtgaaaccct	gtctctacta	aaaataaaaa	6660
2464	aattagccag	ttgtagtgg	ggatgccagt	aatcccagct	actcaggagg	ctgaggcggt	6720
2465	agaatttctt	gaacccggga	tgagggtggt	gcagtgagcc	gagatcacac	cactgcactc	6780
2466	cagcttgggg	aatagagcaa	gactctgtct	tcaaaaagaa	aagaaataga	aatgtcgttc	6840
2467	atttccaaat	tttggctggt	aacttaccta	aggaggataa	acattgtcac	agaatattta	6900
2468	ctgagcatct	actttatacc	agggtctggt	ctgaatactg	gtaacacgca	gttaatgctg	6960
2469	ttgggtctgt	ttttcatggt	ccatgtataa	attacctctt	aaaactatga	ttgttttcat	7020
2470	tcattcattc	atttttgaga	tccgggtctca	aaataggctg	gggtgcagtg	gctcgataac	7080
2471	agctaactac	atcctcaaac	ctccaggctc	aagccatcct	ccgacctcag	cttcctaagt	7140

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2472	agctgggact	gcaggcatgt	gccaccatgc	ccagctagtt	gttgttggtt	tttttttttt	7200
2473	tggtatttgt	tgtagagaca	gggtttccacc	atgttgccca	gggtggtctt	gaactcctga	7260
2474	cctctagtga	tccaccacgc	tccgactctc	aaaatgctga	aattacaggc	atgagccact	7320
2475	gagcccagcc	tattaatttt	tgattgccct	attcagattt	agtggatga	atttactgat	7380
2476	tgggatgttt	tgaacacaca	gaataacatg	tttaactaaa	gaacttgtaa	ttgagtga	7440
2477	tataaaatga	aacattttta	tcttctaggt	attattaacc	caaagaatcc	aaaggaagct	7500
2478	ccaaagtcc	tcagcttcga	ctattcctac	tggtctcata	cctcagtgag	taccctcatg	7560
2479	ccacagcact	gccagctcct	gcctcctttc	ctctttcctt	gccgatttgt	cttttctctt	7620
2480	agctgagcag	atccaagtgt	tgcttcttaa	ctgttggtga	gcatgagttc	attctttgat	7680
2481	acagtgat	agtattttca	ttcataaagt	atttgggttg	atggaaagt	tatgtacaca	7740
2482	tatacataaa	tatatacaca	tatatacata	cagaacatat	ttagtttaca	ccaaatttat	7800
2483	actgaatgta	cactaaattt	atactgattt	agacatttct	tgaggattta	tttatcagta	7860
2484	tcttaggatc	ctcattacca	acattattgc	ccattgatct	taggaaatgc	caaataataa	7920
2485	taattattat	tattattatt	atttttcttc	tgagacggag	tctcactctg	tcgcccaggc	7980
2486	tggagtacag	tggtgccatc	ttggctcact	gcaacctccg	cctccgaggt	tcaagcgatt	8040
2487	ctcccgctc	agcctccga	gtagctggga	ttacaggcgc	gtggcactat	gccagctaa	8100
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2489	tgaccttaag	tgatccacct	gtgtttgcct	cccaaagtgc	tgggattaca	ggtgtgagcc	8220
2490	actgtgcctg	gctggaaatg	ccaaattaaa	attgcttagg	gtactgttaa	ttttaagttg	8280
2491	aattttgagg	gaatggccag	caagattggg	aatgaccaca	gagaaattgk	tttttttttg	8340
--> 2492	gtttgtttgt	ttgtttttgg	gtaggntgat	tttgaactcc	tgacctcctg	atccacctgc	8400
--> 2493	ctcgacctnt	caaaatgttg	ggattaaagg	agtgaagccc	cgngmctggc	caattttttt	8460
--> 2494	tttttaattg	tagtananca	angtgggttt	tgaacatttt	gaaagatgat	accgtgcctc	8520
2495	tactaaaaat	tccaaaaaaa	aaaaaaatta	ggtgggcttg	gtggcggtg	cctgtaatcc	8580
2496	cagctacttg	ggaggctgag	gcagggtgaa	tgcttgaaac	cagggaggtg	gaggttgca	8640
2497	tgagccgaga	tcgcaccact	gcactccagc	ctgggtgatg	gaacatgact	gtgtctcaaa	8700
2498	aaaaaaaaaa	ggaaagaggc	tcagatcca	caagggaac	aaaagattac	cagtattacg	8760
2499	aaaatgcaga	gtagggccct	tcttgaccc	ttactcagtg	tggaaccca	aatgttgctg	8820
2500	cttcttaggg	attgttcata	gagtttactt	ctgcatcatt	catctctttg	ttacatgttt	8880
2501	ttgggtttgt	ttttcctggt	ttgtattttt	ttttaagac	tgagtctcgc	tctgttgcc	8940
2502	aggctggagt	gcagtggcat	gatctcagct	cactgcaacc	tacacctcct	gggttcaagc	9000
2503	agttctcctg	cttcagcctc	ctgagtatct	gagattacag	gcaggtgcca	ccacaccggg	9060
2504	ctgatttttt	taatttttag	tagagatggg	gtttcgctgt	gttggccagg	ctggtctcga	9120
2505	attcctatcc	tcaagtgatc	tgcccgccct	ggcctcccag	agtgatggga	ttacaggcat	9180
2506	gagccactgt	gccctgccct	ggggaatcga	tgttttaaac	tattgacaaa	gcctaattgt	9240
2507	caagggaagg	gactgagaag	gggattggaa	atgctgtttc	ctgaaagctg	tgtttattga	9300
2508	gaaatagtcc	cagttagctg	agtgaattca	aagaagtatt	tttatatgtg	gacttgacct	9360
2509	ttgggtcttt	attctcattt	tccacttaag	aaaatcttgg	ctgtgtgaat	gaaagagtga	9420
2510	tacttttaag	gttatagaaa	gtgaaatgta	atcatgccag	ataattttat	atagatattt	9480
2511	ttatgtatgg	ctgacctgga	tgactctaac	agtgcattgt	tttgtgagtg	tgtgtgtgtg	9540
2512	catgtgcgtg	tatttaatga	gaaaagtaaa	cttgtgtata	ggaggcttaa	aaaatgtgta	9600
2513	gggaatttta	ggtgactggt	ctgattccag	acacttttat	tatggaagca	atcaagtaag	9660
2514	tataggaaga	aatattaata	aaaggttatt	tatttctcct	tttactcttt	acagcccga	9720
2515	gatccctgtt	ttgcatctca	aaaccgtgtg	tacaatgaca	ttggcaagga	aatgctctta	9780
2516	cacgcctttg	agggatataa	tgtctgtatt	tttgcctatg	ggcagactgg	tgctggaaaa	9840
2517	tcttatacaa	tgatgggtaa	acaagaagaa	agccaggctg	gcatcattcc	acaggtgaaa	9900
2518	aacaaaacaa	aacaaaaatc	ttctcttcat	tattagtgtt	agtcttaaat	tgctttaaca	9960
2519	gttattttta	tttggcgaa	atattatgcg	ggattgtttt	atgtcaggca	caaagatgaa	10020
2520	caaccatta	ttttccctca	gaggagctca	caattgaatg	ggaaggattg	acatgtacac	10080

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2521	atgtctgtca	ttaaagggtgg	gaaagtcagt	gttttgtaat	gattttgcca	tatatccaat	10140
2522	gccatattat	tttgtcattt	gaaaagtgtt	accagcttgt	taaagctctg	ttctaagtc	10200
2523	tggagatggg	gggatattgt	tgatctgatt	ttttttcaaa	ttccatgcat	agattacctc	10260
2524	tgaagaatgt	gattatTTTT	ggTTTTTTTg	atagccttat	tcggagatac	tttcatTTTa	10320
2525	TTTTccta	at	gactTTaaac	ttcaaacact	ctgagattct	ccctctTTTT	10380
2526	TTTTTTTTT	agaacagTta	gtattattgg	gtttgatcct	ttattgtttg	ggaatgaaga	10440
2527	agcgttctga	catagatatt	tatttatTTT	tattttcatt	attcgtttca	cttaggattt	10500
2528	aatggtgaaa	gacataagta	tttaaaaaga	acttcattat	ttacttattt	atttgagaca	10560
2529	gggtctcaat	ctgttgcccc	tgctggagtg	cagtgggtgtg	atcttggtct	actgaggcct	10620
2530	tgtcctccca	ggctcaagtg	atcctcctgc	cttagcctcc	agagtagctg	ggactaaagc	10680
2531	catgtgccac	cacacctagc	tcatttttaa	attaaaaaaa	aaaaaaattt	TTTTTTTTT	10740
2532	ttgaggTgga	gtctctctct	gttgcccagg	ctggagtTga	atggcgccat	cttggtctac	10800
2533	Tgcaacctcc	gcctcctggg	ttcaagtgat	tctcctgcct	cagcctccca	agtagctggg	10860
2534	acaataggca	cccaccacta	Tgcctggcta	atttttgTat	ttttagtaga	ggcggggtt	10920
2535	caccatgttg	gtcctggTct	ggatctcctg	acctcaggca	atccgcccac	ctccgcctcc	10980
2536	caaagtgcag	ggattgcagg	catgagTcac	catgcccggc	ctttaaaatt	TTTTTTTTtag	11040
2537	agacagggtc	tcaccatgtt	gtccaggctg	gtctcgaatg	gacctgggct	ccatcctggg	11100
2538	cttgggatga	tctgcctgcc	tcgacttcca	gaagtactgg	gattacaggc	atgagccact	11160
2539	gtgcggggcc	taaaaactta	agaaaaaaaa	aagattaagt	gagaagattg	tatttaaaat	11220
2540	tttcctTTTa	tagtcatgca	tcacttaagg	gtgggggtac	attttgagaa	atgcatcatt	11280
2541	agtcgttagg	TgcttttTgt	attgtacaga	tatcatagag	TgtactTaca	caaaccctgg	11340
2542	aaggTgtaaa	ctgctccaca	cctagactgc	gttgTatagc	ctgttgctcc	aaggctataa	11400
2543	actTgtgtag	catgctactg	tactgaatac	tacaggcaat	tataatagga	TggtaaTtat	11460
2544	ttgtatatct	aaacatagaa	aagtacatta	aaaatatgat	ataaaagatt	Tgaaatggca	11520
2545	cacctgcata	gtgctctTac	actggagctt	gcagggtctg	aagttgctct	gggtgagTca	11580
2546	gtgagcaagt	ggTgagTaaa	Tgtgaaggcc	taggacattg	ctttgcagta	ttgtagactt	11640
2547	tataaatgct	gcacacttag	gctacactaa	atttagtttt	aaaaacagtt	tcctttcaat	11700
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2551	gttcgagacc	agcctgacca	acatggTgaa	accccgTgtc	tactaaaaat	acaaaaaaat	11940
2552	gagccaggca	Tggtggcgca	TgcctgTaat	cccagctact	Tgggaggctg	aggcaggaga	12000
2553	attgcttgaa	cccaggagac	ggaggTtgca	gtgagctgag	atcgcgccat	Tgcactctag	12060
2554	catgagcaac	aagagtga	ctcggtctca	aaaaaaaaaa	aaagaaacca	cacacacact	12120
2555	ttgtacagct	gtacaaaaat	attttctttc	ttcatactct	tattctataa	gcttttttgt	12180
2556	attttttaat	tttttttttc	tttcttgaga	cagagtcttg	ctttgtcacc	caggctggag	12240
2557	tacagtggcg	ccctatcagc	tcactgcaac	ctccgcctcc	Tgggttcaat	taattcttgt	12300
2558	gccttagcct	cctgagtagc	Tgggactaca	ggcacgtacc	accacgtctg	gctaattttt	12360
2559	gtatttttag	tagagacggg	gtttcacaa	gttgccagg	ctggTcttga	actcctggcc	12420
2560	tcaagtgatc	Tgcctgcctt	ggcctcccaa	agtgtgaga	tttacaggcg	Tgagccactg	12480
2561	cacctggcca	aatttttttt	tttttttttt	agacagagtt	tcactcctct	Tgccaggct	12540
2562	ggaatgcagt	ggcacgatct	Tggctcactg	caacctccgc	ctcctgggtt	caagcgattc	12600
2563	tcctgcctca	gcctccagaa	tagctgggac	tatttttgta	tttttagtag	agatgggggt	12660
2564	tcaccatgtt	ggccaagatg	ttctcgatct	cctgaccttg	Tgatctgcct	gcctcgtcct	12720
2565	cccaaagtgc	Tgggattaca	ggcatgagcc	accttgccca	gccccaaatt	Ttaatttttg	12780
2566	aaaaaaatt	Taaacttttt	Tgttaaaaa	Ttaggcacac	atttattagc	ctaggcctac	12840
2567	acagggtcag	gatcatcaag	atatcactag	gtgacaggaa	ttttccagct	ttcttataat	12900
2568	cttatgggga	Tcactatcat	atatgcagtc	catcgTtgac	cgaatcatgg	Ttatgcagcg	12960
2569	catgactgac	tttattcaaa	gcattaatcg	Tatcttgatg	tttatgacat	aatatatTTT	13020

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2570 gagatggagc aagaaaggac gtctgggctaa ttcattgagc acgcgtggat gacttagtac 13080
2571 tcctctcatt tgtgctcttc atgcctctct cattctactt ccctagtatt gtgaagaact 13140
2572 ttttgagaaa atcaatgaca actgtaatga agaaatgtct tactctgtag aggtgagtag 13200
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2574 tccaaattat gactgtggta cacatcactt caccattcct tcatttttgt cctttcaggc 13320
2575 tattttctggg ttttgggtat aatgaatagt gtcctgcttt aatctttttt ttgggggggtg 13380
2576 cgcggtgggg acaggggtctc actctgttgc ccaggccctg gagtgcagtg gcgtgatcac 13440
2577 agctcactgc agccttgacc ttctgggcca aagcgatctt accccctcag cttctcaagt 13500
2578 agctgggaca acaggtgtgt gccaccacca cccctagata attgattttt ttgtagagat 13560
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2580 ctccacctct gaaagtgtct gggttgcagt gtgaatcact gagcccagcc acaattaaat 13680
2581 ctttgttcat aagtctgtgc atttatttgc agttattatc ttttgtatgt ttcttggtt 13740
2582 ttaaataata catttgaatt gccaaatgcc ttttggaaa gtaatgctgg gtaacagttt 13800
2583 tcagtcacac taggaggggtg taagcaccca ttgtgccctt gccaacattt ttctattttt 13860
2584 taatctttgc taatttgata atgtaagtat tctcttactt aaattttgaa tttctttgat 13920
2585 tactagt 13927
6306 <210> SEQ ID NO: 83
6307 <211> LENGTH: 614
6308 <212> TYPE: DNA
6309 <213> ORGANISM: HOMO SAPIENS
6311 <400> SEQUENCE: 83
6312 gtaaagatgg gggtagagaa aacaattaaa tagaacaaaa acaactgttt ccttttcttg 60
6313 tgattcaaga agggcttaga tcttctactc agcatccttt tactaatgcc ctccattggc 120
6314 tctcacccca acatttcttt ttttatagct tattttgtaa tgctctctta attatccttt 180
6315 aatagaagcc accgctgata agctacctac actcatacag aagcattaat ataatgcccc 240
6316 agatgtactg tttcaggggc aaaaaggaaa ataatttcca acaaagtggg gtgtgtttca 300
E--> 6317 ctgtcagatg cttgcactta cacacngaatt cgctgggcat ccgacagagg ctgattggca 360
E--> 6318 catgggggca cgggggattg gncagctnaa accccggncn gcagcgggtg cccctttggg 420
E--> 6319 aaaatgggga ttttccaaa aacaagtaaa accggggtnt ggtccttgga ttttaccaga 480
E--> 6320 gtangctacc atttcttagc tttgggatnc ccgnccatna aggggccaat ttcaactggg 540
E--> 6321 ccggtcgttt tnaccaacgn tcgtgactgg ggnaaaancc cttggcggtt acccccaact 600
E--> 6322 tnaatngnct ttgg 614

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## VARIABLE LOCATION SUMMARY

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Use of n's or Xaa's (NEW RULES) :

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of &lt;220&gt; to &lt;223&gt; is MANDATORY if n's or Xaa's are present.

in &lt;220&gt; to &lt;223&gt; section, please explain location of n or Xaa, and which residue n or Xaa represents. }

Seq#:54; N Pos. 117,205,236,271

Seq#:55; N Pos. 1,122,424

Seq#:56; N Pos. 336,346,360,366

Seq#:59; N Pos. 443

Seq#:67; N Pos. 8366,8409,8443,8445,8476,8478,8482

Seq#:83; N Pos. 326,382,388,398,400,459,484,509,514,519,552,560,573,578,602

Seq#:83; N Pos. 606,608

## VERIFICATION SUMMARY

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Input Set : A:\72613.txt

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L:930 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:60  
L:932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:180  
L:933 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:240  
L:947 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:0  
L:949 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:120  
L:954 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:420  
L:972 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:300  
L:973 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:360  
L:1032 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59 after pos.:420  
L:2492 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:67  
M:340 Repeated in SeqNo=67  
L:6317 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:83  
M:340 Repeated in SeqNo=83